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## SPACE OPERATIONS CONTROL CENTER

# SATELLITE SITUATION REPORT

VOL. 3, NO. 20

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OCTOBER 15, 1963

**NASA**

GODDARD SPACE FLIGHT CENTER

GREENBELT, MD.

SPACE OPERATIONS CONTROL CENTER  
GODDARD SPACE FLIGHT CENTER  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

VOLUME 3 NO. 20

OCTOBER 15, 1963

SATELLITE SITUATION REPORT

THE FOLLOWING REPORT REFLECTS DATA COMPUTED AND COMPILED BY THE  
GODDARD SPACE FLIGHT CENTER, NORAD, AND SMITHSONIAN ASTROPHYSICAL  
OBSERVATORY AS OF 1200Z ON OCTOBER 15, 1963.

OBJECT	OBJECTS IN ORBIT					TRANSMITTING FREQ. (MC/S)	
	CODE NAME	SOURCE	LAUNCH	NODAL PERIOD	INCL- NATION		
1958 LAUNCHES							
ALPHA 1	EXPLORER 1	US	1 FEB	104.8	33.20	108.017 &	
BETA 1	ROCKET BODY	US	17 MAR	138.3	34.24		
BETA 2	VANGUARD 1	US	17 MAR	133.8	34.23		
1959 LAUNCHES							
ALPHA 1	VANGUARD 2	US	17 FEB	125.3	32.86	560	
ALPHA 2	ROCKET BODY	US	17 FEB	129.5	32.90	531	
ETA 1	VANGUARD 3	US	18 SEP	129.7	33.34	467	
MU 1*	LUNIK 1	USSR	2 JAN	450 D	0.01	1.315AU	
NU 1*	PIONEER 4	US	3 MAR	398 D	1.30	0.9766AU	
IOTA 1	EXPLORER 7	US	13 OCT	101.1	50.31	1.142AU	
IOTA 2	ROCKET BODY	US	13 OCT	100.9	50.31	551	
1960 LAUNCHES							
ALPHA 1*	PIONEER 5	US	11 MAR	312 D	3.35	0.995AU	
BETA 1	ROCKET BODY	US	1 APR	99.0	48.35	0.8061AU	
BETA 2	TIROS 1	US	1 APR	99.1	48.36	697	
BETA 3	NONE	US	1 APR	97.8	48.50	690	
BETA 4	NONE	US	1 APR	99.8	48.13	620	
GAMMA 2	TRANSIT 1B	US	13 APR	94.1	51.19	694	
GAMMA 4	NONE	US	13 APR	96.7	51.25	350	
EPSILON 3	NONE	USSR	15 MAY	91.8	64.98	489	
ZETA 1	MIDAS 2	US	24 MAY	94.2	33.05	256	
ETA 1	TRANSIT 2A	US	22 JUN	101.6	66.70	464	
ETA 2	GREB	US	22 JUN	101.6	66.68	613	
ETA 3	ROCKET BODY	US	22 JUN	101.4	66.66	607	
IOTA 1	ECHO 1	US	12 AUG	114.7	47.30	612	
IOTA 2	ROCKET BODY	US	12 AUG	118.0	47.26	992	
IOTA 3	METAL OBJECT	US	12 AUG	118.2	47.21	1497	
IOTA 4	METAL OBJECT	US	12 AUG	INSUFFICIENT OBSERVATIONS			1517
IOTA 5	METAL OBJECT	US	12 AUG	118.3	47.27	1686	
						1523	

# OBJECTS IN ORBIT

OBJECT	CODE NAME	SOURCE	LAUNCH	NODAL PERIOD	INCLI - NATION	APOGEE	PERIGEE	TRANSMITTING FREQ. (MC/S)	
						Km.	Km.		
1960 LAUNCHES									
NU 1	COURIER 1B	US	4 OCT	106.8	28.35	1226	952		
NU 2	ROCKET BODY	US	4 OCT	106.4	28.32	1178	957		
XI 1	EXPLORER 8	US	3 NOV	112.3	49.94	2255	414		
XI 2	ROCKET BODY	US	3 NOV	111.9	49.95	2219	415		
XI 3	NONE	US	3 NOV	109.7	49.36	2030	399		
XI 4	NONE	US	3 NOV	110.7	50.50	2110	417		
PI 1	TIROS 2	US	23 NOV	98.2	48.50	740	609		
PI 2	ROCKET BODY	US	23 NOV	98.0	48.51	722	616		
PI 3	NONE	US	23 NOV	98.1	48.52	721	622		
PI 4	NONE	US	23 NOV	98.2	48.49	735	621		
1961 LAUNCHES									
ALPHA 1	SAMOS 2	US	31 JAN	94.8	97.42	542	470		
ALPHA 2	METAL OBJECT	US	31 JAN	94.7	97.42	538	468		
GAMMA 1*	VENUS PROBE	USSR	12 FEB	300 D	0.58	1.019AU	0.7183AU		
DELTA 1	EXPLORER 9	US	16 FEB	114.8	38.94	2479	423		
DELTA 2	ROCKET BODY	US	16 FEB	118.4	38.85	2609	623		
DELTA 3	NONE	US	16 FEB	INSUFFICIENT OBSERVATIONS					
KAPPA 1	EXPLORER 10	US	25 MAR	POSITION UNCERTAIN					
NU 1	EXPLORER 11	US	27 APR	107.8	28.84	1771	495		
OMICRON 1	TRANSIT 4A	US	29 JUN	103.8	66.80	999	879	150;400	
OMICRON 2	INJUN-SR-3	US	29 JUN	103.8	66.80	997	882		
OMICRON 3-206**	METAL OBJECTS	US	29 JUN						
RHO 1	TIROS 3	US	12 JUL	100.3	47.89	817	739		
RHO 2	ROCKET BODY	US	12 JUL	100.3	47.87	805	745		
RHO 3	METAL OBJECT	US	12 JUL	98.8	47.92	813	595		
RHO 4	METAL OBJECT	US	12 JUL	101.9	47.84	938	769		
SIGMA 1	MIDAS 3	US	12 JUL	161.5	91.20	3527	3362		
SIGMA 3	METAL OBJECT	US	12 JUL	161.2	91.13	3556	3306		
SIGMA 4	METAL OBJECT	US	12 JUL	161.9	91.27	3578	3344		
UPSILON 1	EXPLORER 12	US	16 AUG	INSUFFICIENT OBSERVATIONS					
A DELTA 1	MIDAS 4	US	21 OCT	166.0	95.86	3769	3483		

<u>OBJECTS IN ORBIT</u>				<u>TRANSMITTING</u>		
<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u> <u>PERIOD</u> <u>INCL -</u> <u>NATION</u>	<u>APOGEE</u> <u>Km.</u>	<u>PERIGEE</u> <u>Km.</u>	<u>FREQ. (MC/S)</u>
1961 LAUNCHES						
A DELTA 3	METAL OBJECT	US	21 OCT 165.6 95.87	3723	3496	
A DELTA 4	METAL OBJECT	US	21 OCT 166.4 95.80	3779	3507	
A ETA 1	TRANSIT 4B	US	15 NOV 105.6 32.43	1118	944	
A ETA 2	TRAAC	US	15 NOV 105.6 32.45	1110	954	
A ETA 3	ROCKET BODY	US	15 NOV 105.5 32.44	1092	957	
1962 LAUNCHES						
ALPHA 1*	RANGER 3	US	26 JAN 406.4D .3988	1.163AU	0.9839AU	
ALPHA 2	ROCKET BODY	US	26 JAN INSUFFICIENT OBSERVATIONS			
BETA 1	TIROS 4	US	8 FEB 100.3 48.29	839	714	
BETA 2	ROCKET BODY	US	8 FEB 101.3 48.11	956	690	
BETA 3	METAL OBJECT	US	8 FEB 99.4 48.40	768	699	
BETA 4	METAL OBJECT	US	8 FEB 100.2 48.30	828	719	
ZETA 1	ORB. SOL. OBS. 1	US	7 MAR 95.9 32.83	594	544	
ZETA 2	ROCKET BODY	US	7 MAR 95.9 32.82	575	566	
KAPPA 1		US	9 APR 153.0 86.68	3412	2783	
KAPPA 3		US	9 APR 152.7 86.67	3370	2793	
KAPPA 4		US	9 APR 153.4 86.66	3432	2791	
MU 2	ROCKET BODY	US	23 APR INSUFFICIENT OBSERVATIONS			
OMICRON 1	ARIEL	US/UK	26 APR 100.6 53.86	1195	384	136.406
OMICRON 2	ROCKET BODY	US/UK	26 APR 100.6 53.87	1176	399	
SIGMA 1		US	15 MAY 90.8 82.32	365	252	
OMEGA 1		US	18 JUN 89.7 82.15	263	254	
A ALPHA 1	TIROS 5	US	19 JUN 100.5 58.10	955	605	
A ALPHA 2	ROCKET BODY	US	19 JUN 100.4 58.11	950	609	
A ALPHA 3	METAL OBJECT	US	19 JUN 101.7 58.21	1067	617	
A ALPHA 4	METAL OBJECT	US	19 JUN 99.1 57.99	851	581	
A EPSILON 1	TELSTAR 1	US	10 JUL 157.7 44.81	5633	959	
A EPSILON 2	ROCKET BODY	US	10 JUL 157.6 44.83	5630	948	

OBJECT	OBJECTS IN ORBIT				PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
	CODE NAME	SOURCE	LAUNCH	NODAL PERIOD		
1962 LAUNCHES						
A OMICRON 1		US	23 AUG	99.6	859	613
A OMICRON 2		US	23 AUG	98.3	752	598
A OMICRON 3		US	23 AUG	100.9	968	626
A OMICRON 4		US	23 AUG	99.6	859	613
A RHO 1*	MARINER 2	US	27 AUG	COMPUTATIONS IN PROGRESS		
A RHO 2*	ROCKET BODY	US	27 AUG	COMPUTATIONS IN PROGRESS		
A UPSILON 1		US	1 SEP	92.9	551	284
A PSI 1	TIROS. 6	US	18 SEP	98.7	700	696
A PSI 2	ROCKET BODY	US	18 SEP	98.7	715	676
A PSI 3	METAL OBJECT	US	18 SEP	99.4	779	680
A PSI 4	METAL OBJECT	US	18 SEP	98.0	701	629
B ALPHA 1	ALOUETTE	CANADA	29 SEP	105.5	1040	993
						136.979; \$136.594
						\$136.077
B ALPHA 2	ROCKET BODY	US	29 SEP	105.5	1034	994
B ALPHA 3	METAL OBJECT	US	29 SEP	105.4	1027	995
B ALPHA 4	METAL OBJECT	US	29 SEP	105.5	1051	982
B GAMMA 1	EXPLORER 14	US	2 OCT	2185.0	97129	1673
B GAMMA 2	ROCKET BODY	US	2 OCT	INSUFFICIENT OBSERVATIONS		
B ETA 1*	RANGER 5	US	18 OCT	366 D	1.052AU	.9490AU
B ETA 2*	ROCKET BODY	US	18 OCT	COMPUTATIONS IN PROGRESS		
B THETA 1		USSR	20 OCT	93.2	638	232
B KAPPA 1		US	26 OCT	140.9	4936	246
B LAMBDA 1	EXPLORER 15	US	27 OCT	314.4	17579	318
B LAMBDA 2	ROCKET BODY	US	27 OCT	INSUFFICIENT OBSERVATIONS		
B MU 1	ANNA 1B	US	31 OCT	107.8	1178	1082
B MU 2	ROCKET BODY	US	31 OCT	107.5	1150	1082
B NU 3*		USSR	1 NOV	519 D	1.604AU	.9237AU
B TAU 1		US	13 DEC	113.0	2489	235
B TAU 2	INJUN 3	US	13 DEC	114.5	2622	240
B TAU 4		US	13 DEC	111.3	2335	234
						162; 324
						\$136.869

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>NODAL PERIOD</u>	<u>INCLINATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1962 LAUNCHES								
B TAU 5		US	13 DEC	112.9	70.34	2485	232	
B TAU 6		US	13 DEC	114.1	70.37	2585	244	
B UPSILON 1	RELAY 1	US	13 DEC	184.9	47.50	7439	1316	136.140; 136.620
B UPSILON 2	ROCKET BODY	US	13 DEC	184.7	47.55	7422	1316	
B CHI 1	EXPLORER 16	US	16 DEC	104.3	52.01	1194	735	
B PSI 1	TRANSIT 5A	US	19 DEC	99.2	90.63	741	689	
B PSI 2		US	19 DEC	97.9	90.70	738	568	
B PSI 3		US	19 DEC	99.1	90.62	735	694	
B PSI 4		US	19 DEC	100.3	90.46	842	695	
1963 LAUNCHES								
1963 3A		US	16 JAN	94.6	81.89	531	462	
1963 3B		US	16 JAN	92.4	81.87	401	376	
1963 3C		US	16 JAN	93.3	81.87	458	408	
1963 4A		US	14 FEB	1426.3	33.51	37013	34182	
1963 4B	SYNCOM	US	14 FEB	591.1	33.12	33676	248	
1963 5A	ROCKET BODY	US	19 FEB	97.8	100.50	803	496	
1963 5B		US	19 FEB	97.8	100.49	800	498	
1963 5C		US	19 FEB	97.0	100.51	756	471	
1963 5D		US	19 FEB	98.4	100.49	845	517	
1963 8B		USSR	2 APR	COMPUTATIONS IN PROGRESS				
1963 9A	EXPLORER 17	US	3 APR	95.8	57.62	861	258	
1963 9B	ROCKET BODY	US	3 APR	92.4	57.58	558	235	
1963 13A	TELSTAR 2	US	7 MAY	225.3	42.76	10813	967	136.050
1963 13B	ROCKET BODY	US	7 MAY	225.0	42.85	10781	982	
1963 14A		US	9 MAY	166.5	87.38	3682	3606	
1963 14B		US	9 MAY	166.5	87.35	3682	3610	136.892
1963 14C		US	9 MAY	166.5	87.34	3682	3608	136.415
1963 14D		US	9 MAY	166.5	87.36	3676	3611	
1963 14E		US	9 MAY	166.1	87.31	3673	3587	
1963 14F		US	9 MAY	166.9	87.42	3692	3628	
1963 14G		US	9 MAY	166.5	87.33	3666	3624	

OBJECT	CODE NAME	SOURCE	OBJECTS IN ORBIT		INCL- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
			LAUNCH	NODAL PERIOD				
1963 LAUNCHES								
1963 17A		USSR	22 MAY	94.2	48.92	720	248	
1963 17C		USSR	22 MAY	95.7	49.20	773	337	
1963 17G		USSR	22 MAY	93.5	49.03	631	265	
1963 22A		US	16 JUN	99.8	90.00	760	728	150;400
1963 22B		US	16 JUN	99.8	90.02	763	724	
1963 22C		US	16 JUN	101.3	90.22	889	745	
1963 22D		US	16 JUN	98.2	89.82	775	568	
1963 24A	TIROS 7	US	19 JUN	97.4	58.21	658	614	136.234;136.922
1963 24B	ROCKET BODY	US	19 JUN	97.3	58.24	663	603	
1963 24C	METAL OBJECT	US	19 JUN	97.9	58.37	680	635	
1963 24D	METAL OBJECT	US	19 JUN	96.9	58.10	652	569	
1963 25B		US	27 JUN	132.6	82.09	4116	347	
1963 26A	RESEARCH SATELLITE FOR GEOPHYSICS	US	28 JUN	102.0	49.74	1312	405	
1963 27A		US	29 JUN	94.8	82.31	529	483	
1963 27B		US	29 JUN	94.5	82.31	505	479	
1963 30A		US	18 JUL	167.9	88.35	3782	3621	
1963 30B		US	18 JUL	167.9	88.40	3730	3673	136.891
1963 30C		US	18 JUL	167.5	88.37	3730	3644	
1963 30D		US	18 JUL	168.0	88.36	3767	3646	
1963 30E		US	18 JUL	168.3	88.42	3765	3673	\$136.980;\$136.468 \$1814.069;\$1815.794 \$1820.177
1963 31A	SYNCOM 2	US	26 JUL	1436.0	33.16	35811	35761	
1963 31B	ROCKET BODY	US	26 JUL	630.3	33.15	35711	255	
1963 33A		USSR	6 AUG	91.7	49.00	467	260	
1963 33B		USSR	6 AUG	91.2	48.99	427	253	
1963 35A		US	29 AUG	90.1	81.88	287	266	
1963 35B		US	29 AUG	88.3	81.85	186	185	
1963 38A		US	28 SEP	107.1	89.90	1114	1073	
1963 38B		US	28 SEP	107.4	89.90	1138	1077	
1963 38C		US	28 SEP	107.4	89.89	1137	1077	136.650
1963 38D		US	28 SEP	107.4	89.92	1133	1078	



\* APHELION PERIHELION IN ASTRONOMICAL UNITS, INCLINATION TO ECLIPTIC.  
 \*\* TWO HUNDRED AND FOUR METAL OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1961  
 OMICRON 1 AND 1961 OMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE  
 DECAYED OBJECTS LISTS.  
 \$ TRANSMITTING ON COMMAND ONLY.  
 & TRANSMITTING WHEN IN SUNLIGHT ONLY.

PLEASE ADD THE FOLLOWING TO THE DECAYED OBJECTS LIST

OBJECT	CODE NAME	SOURCE	LAUNCH	DECAY
1963 37 A		US	24 SEP	12 OCT 63